

Missouri Department of Natural Resources

Total Maximum Daily Load Information Sheet

Whetstone Creek (East Whetstone Creek)

Waterbody Segment at a Glance:

County: Wright
Nearby Cities: Mountain Grove
Length of impairment: 2 miles
Pollutant: Biochemical Oxygen Demand (BOD)
Source: Two Mountain Grove Wastewater Treatment Facilities



State map showing location of watershed

TMDL Priority Ranking: TMDL approved 2002

Description of the Problem

Beneficial uses of Whetstone Creek

- Livestock and Wildlife Watering
- Protection of Warm Water Aquatic Life
- Protection of Human Health associated with Fish Consumption

Use that is impaired

- Protection of Warm Water Aquatic Life.

Standards that apply

- The Missouri Water Quality Standard, found at 10 CSR 20-7.031 Table A, for dissolved oxygen (related to BOD) in streams is 5.0 mg/L (milligrams per liter or parts per million).

Background Information and Water Quality Data

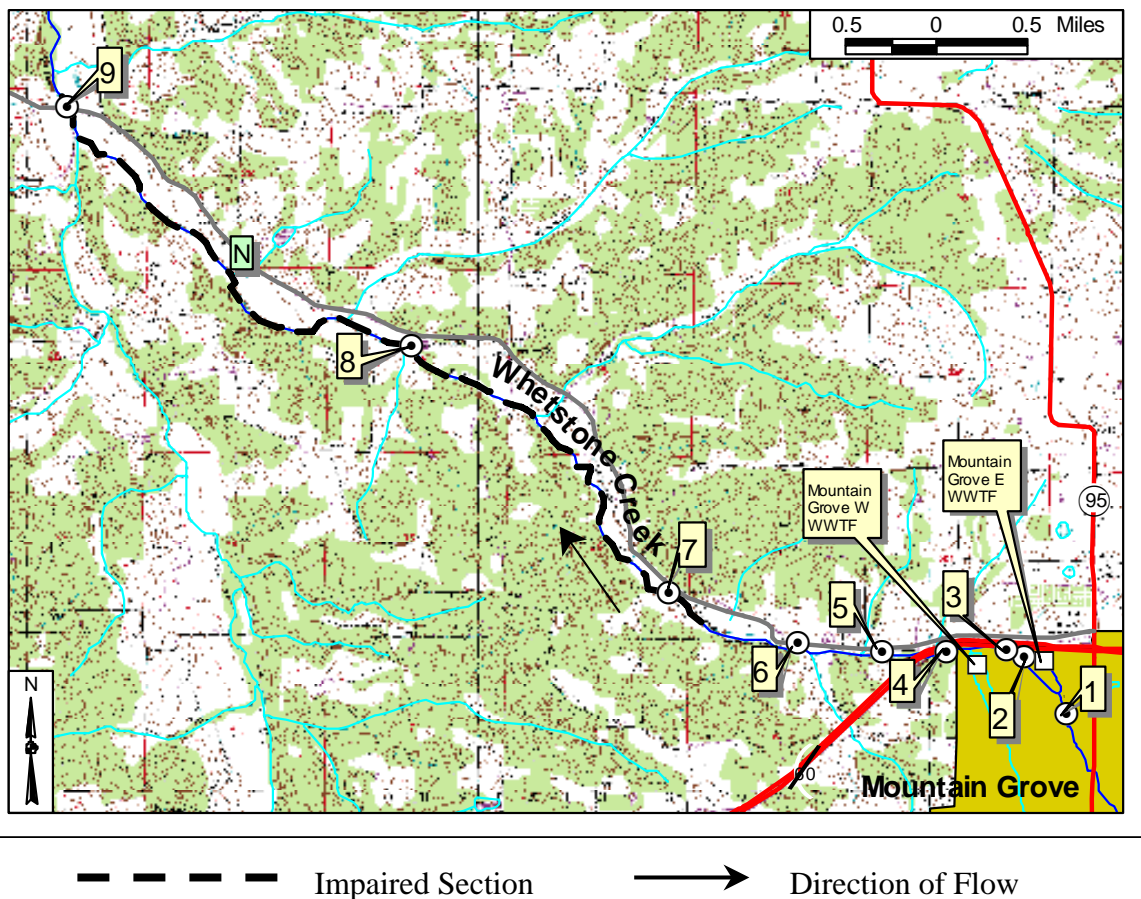
Note: A TMDL document was written for this impairment under the name East Whetstone Creek to conform to United States Geological Survey topographical maps. Missouri Water Quality Standards, however, call the waterbody Whetstone Creek and that name is used here. The name will be corrected to East Whetstone Creek during future revisions of the standards.

No designated uses exist in the immediate discharge area of the two Mountain Grove Wastewater Treatment Facilities (WWTF). Beneficial use requirements begin at the point Whetstone Creek becomes a classified stream, about one mile downstream of the treatment plant discharges. It is presently believed that the low levels of dissolved oxygen in Whetstone Creek are due to the

amount of BOD discharged from the two Mountain Grove WWTFs. Biochemical Oxygen Demand is a stream measurement that relates to dissolved oxygen. Elimination of the lagoon and the more stringent proposed limits on the expanded mechanical West WWTF should help the problem. These requirements were added to the 1999 reissue of the permit. Two studies were conducted recently to monitor conditions on Whetstone Creek. One study was completed in the summer of 2000 and the other during the summer of 2001. Graphs summarizing the data may be found below.

A Total Maximum Daily Load (TMDL) was written for the two miles of impairment on Whetstone Creek. The U.S. Environmental Protection Agency (EPA) approved it on January 28, 2002. Another section of Whetstone Creek somewhat downstream of this section was proposed for addition to the 2002 303(d) list due to low levels of dissolved oxygen. EPA did not approve this addition, however both sections of Whetstone Creek will be monitored after implementation of the TMDL to see if the upgrade of the Mountain Grove WWTFs will eliminate the low DO levels in this downstream portion of the creek, or if other measures will be needed.

Whetstone Creek in Wright County, Missouri, with Sampling Sites

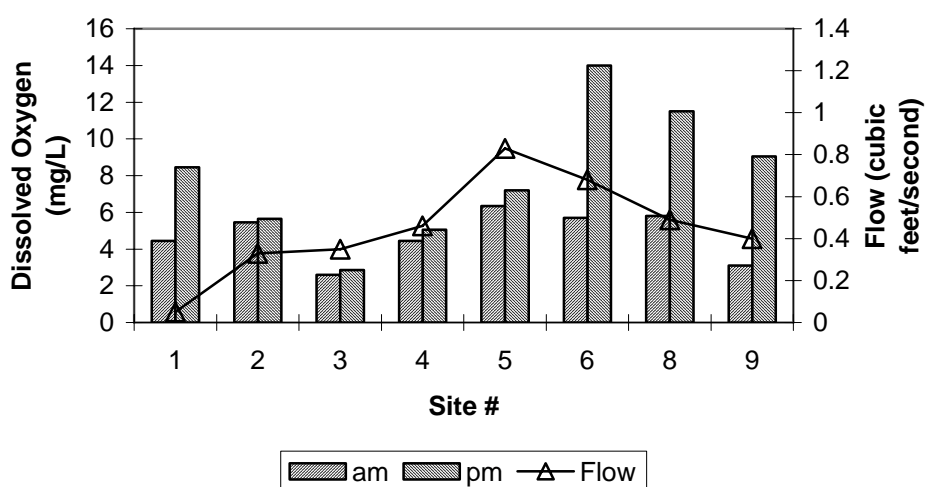


The key to the sites is on the next page, along with graphs summarizing the data.

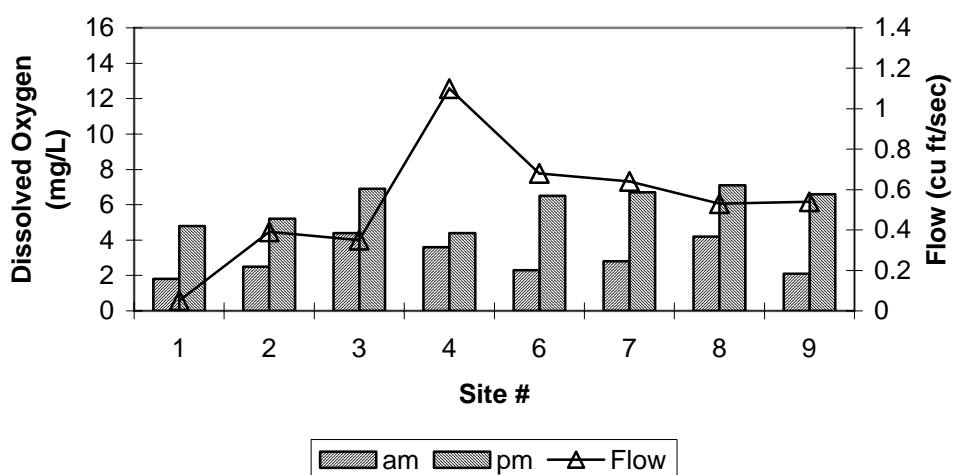
Site Index

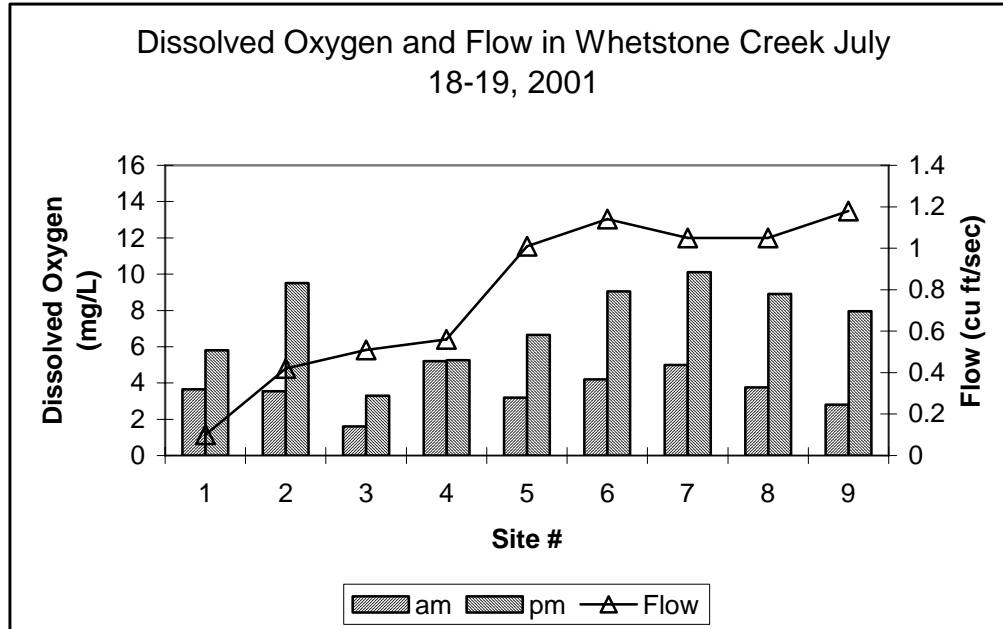
- 1 – Whetstone Creek above Mountain Grove East WWTF
- 2 – Mountain Grove East WWTF Discharge
- 3 – Whetstone Creek below Mountain East WWTF
- 4 – Mountain Grove West WWTF Discharge
- 5 – Whetstone Creek 0.2 mile below Mountain Grove West WWTF
- 6 – Whetstone Creek 0.5 mile below Mountain Grove West WWTF
- 7 – Whetstone Creek 2 miles below Mountain Grove West WWTF
- 8 – Whetstone Creek 3.5 miles below Mountain Grove West WWTF
- 9 – Whetstone Creek 6 miles below Mountain Grove West WWTF

Dissolved Oxygen and Flow in Whetstone Creek
August 23-24, 2000



Dissolved Oxygen and Flow in Whetstone Creek July
10, 2001





Source: Missouri Department of Natural Resources

For more information call or write:

Missouri Department of Natural Resources

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